Developmental Immunology and

Windows of Vulnerability to Asthma

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Asthma

- Symptoms
- Background
- Exacerbating factors
- Pathology
- The Immune Response

THE THYMUS

FEW THYMOCYTES

MEDULLA

DENDRITIC CELLS

CORTICAL EPITHELIAL CELLS

MOST ARE SINGLE POSITIVE

MANY THYMOCYTES

BILOBED

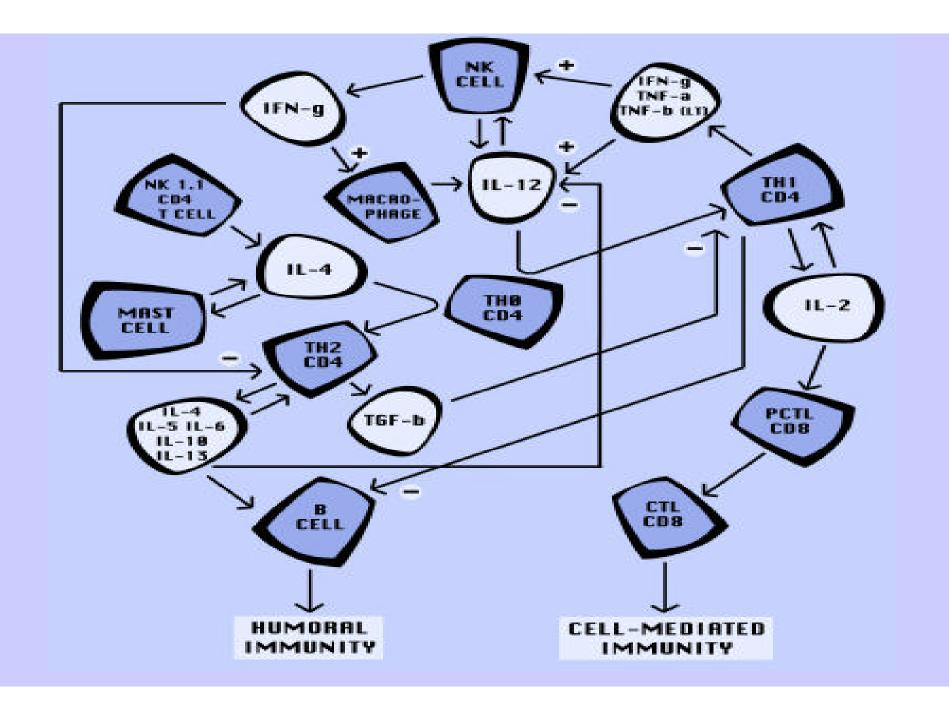
MOST RRE CO4* RND CD8* CORTICO-MEDULLARY
JUNCTION

CORTEX

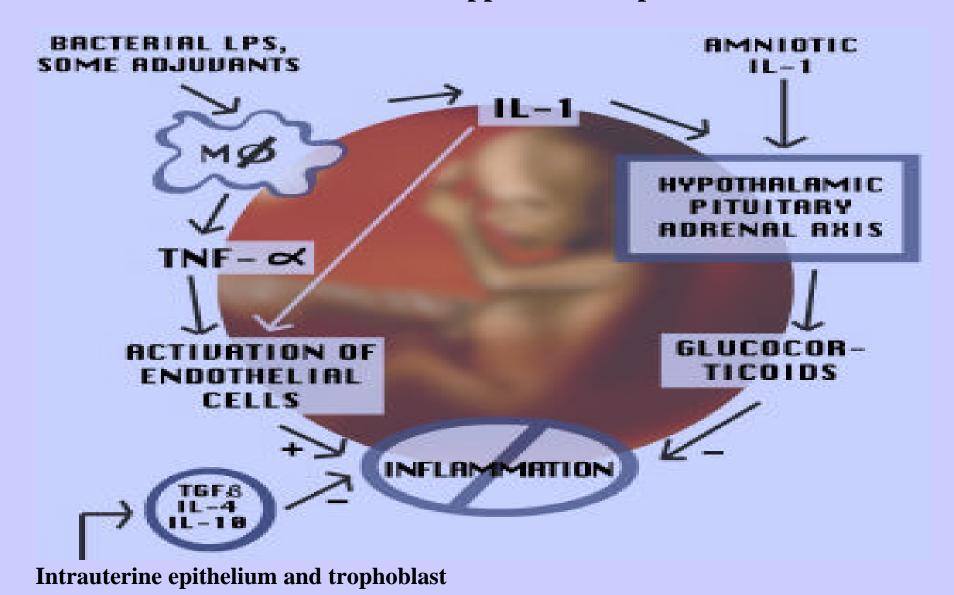
SUBCAPSULAR REGION

CAPSULE

CLOSE-UP OF THYMIC LOBULES



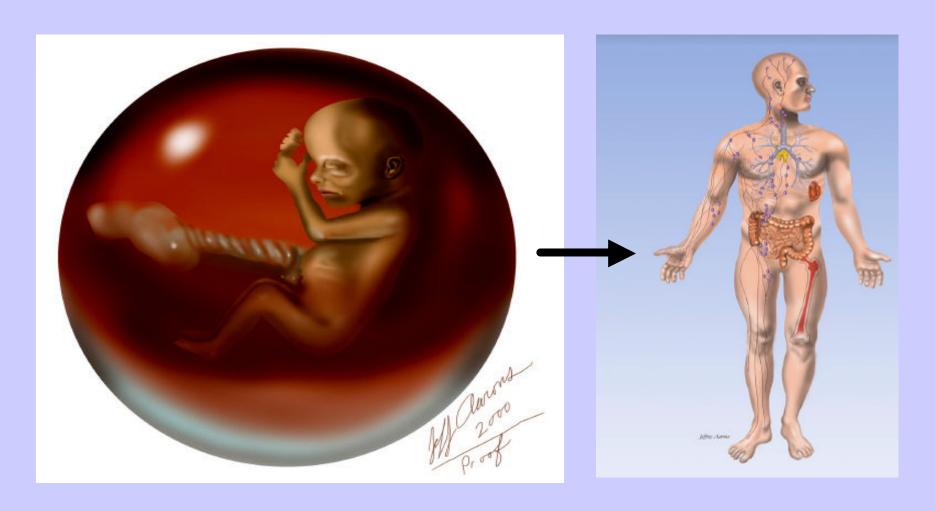
The Fetus Promotes an Immunosuppressive Response in the Mother



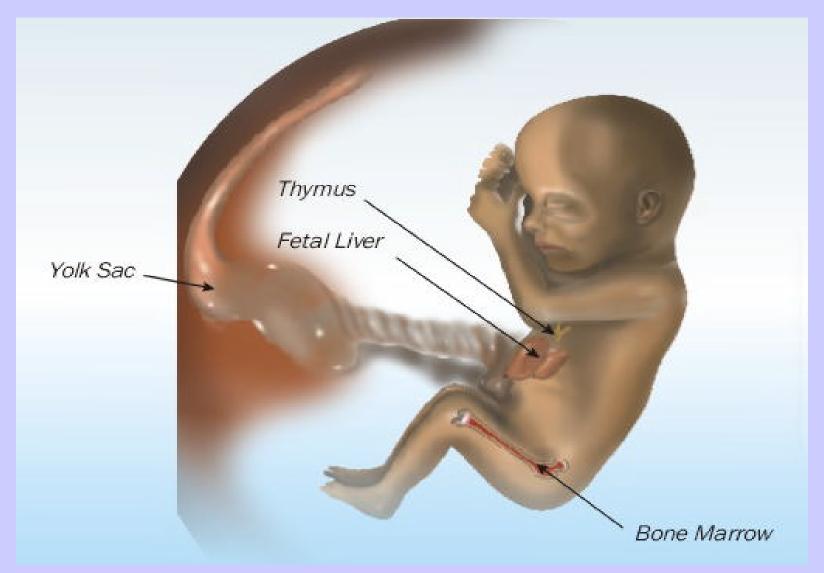
Potentially asthma-associated toxicants

- Pesticides
 - Chlordane
 - Toxaphene
 - •Hexachlorobenzene
- Heavy metals
 - Lead
 - •Mercury
- Industrial chemicals
 - Dioxins
 - •PCBs

Timelines of Immune Development



The Fetal Period



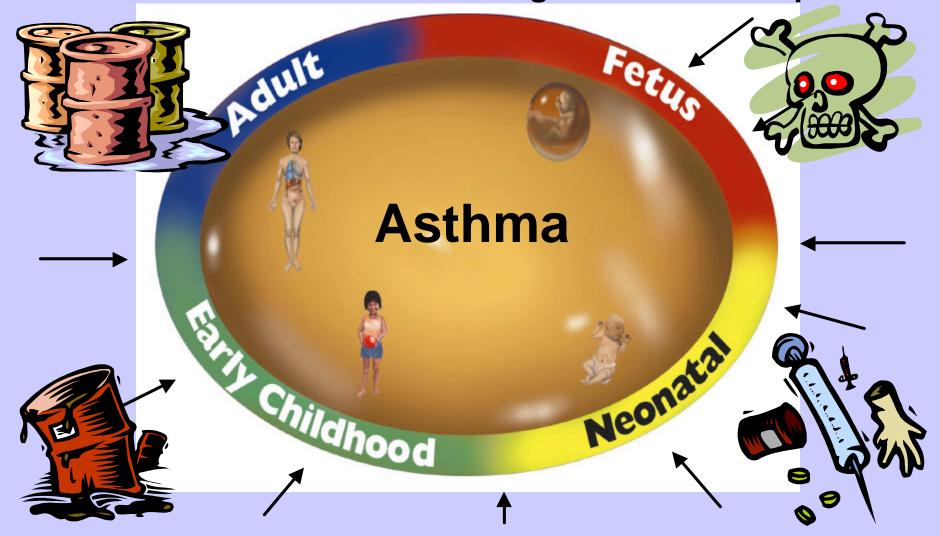
The Neonatal Period



Early Childhood



Potential Windows of Vulnerability to Environmental Toxicants During Immune Development



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